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ABSTRACT

One of a series of studies on the development of technical and vocational education in the member states of UNESCO, this report profiles the educational system in Japan. The three parts of the document provide information about the geography and history of Japan, historical and current perspectives of general education, and technical and vocational education in Japan. Some of the highlights include the following: (1) Japan has a long history of respect for and encouragement of education, and successfully reformed the education system after World War II; (2) since the 1980s, calls for and attempts at reforming the education again have become more widespread as almost-universal education has strained to become more flexible in response to a changing world; (3) all children in Japan attend at least 9 years of school; most go on to 3 more years of upper secondary school, and 36 percent at least start university education; (4) junior colleges, colleges of technology, and special training schools are available to meet students' needs to enter various occupations and have various entrance requirements; (5) all students in lower secondary schools (grades 7-9) receive industrial arts training; (6) technical high schools carry out vocational and technical training on the secondary level; (7) about 1 percent of students are involved in special vocational training provided by the Ministry of Labor. (KC)

ED 399 373

NATIONAL PROFILES IN TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

Japan

UNEVOC
International Project on Technical and Vocational Education

U.S. DEPARTMENT OF EDUCATION
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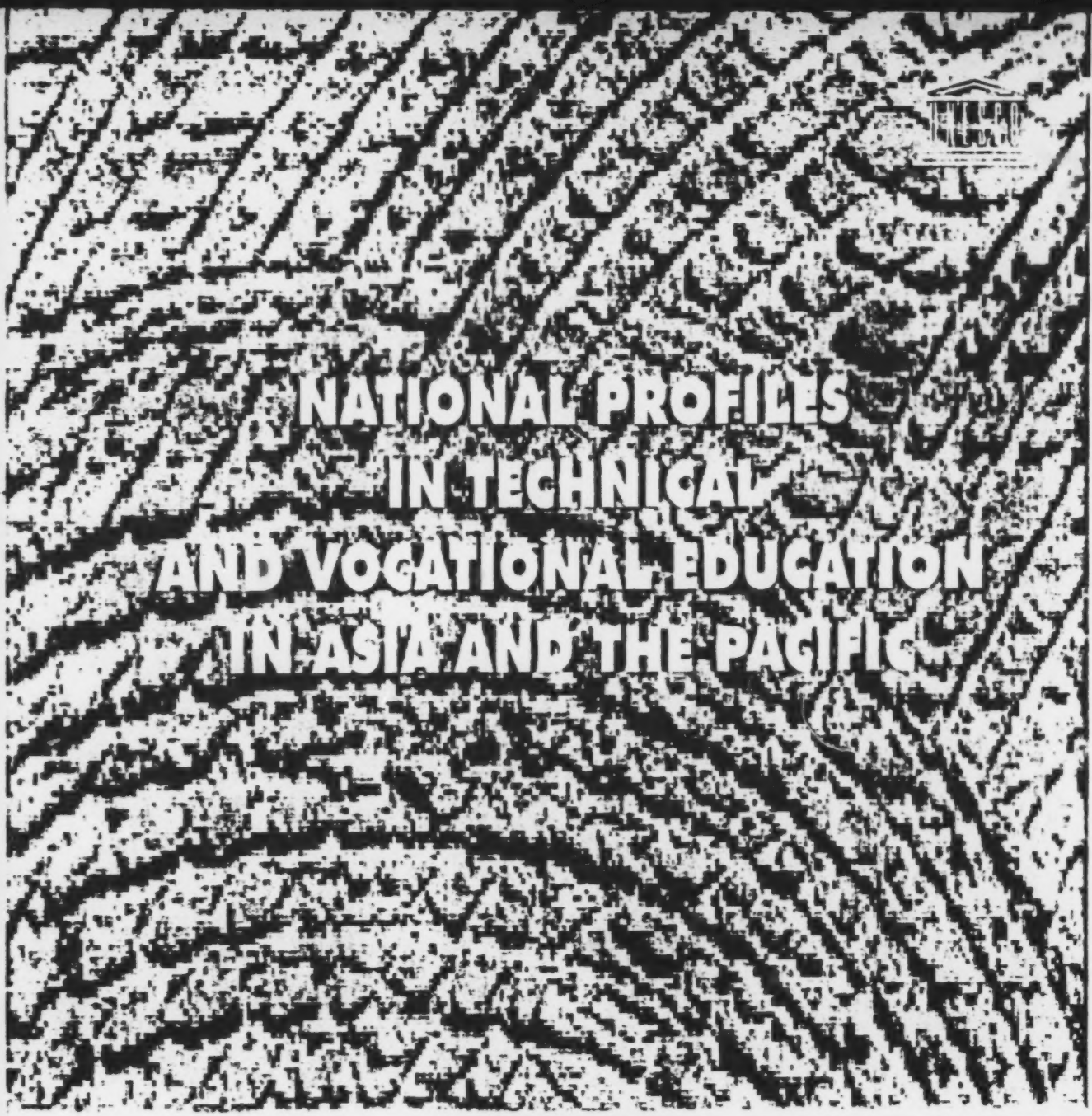

Japan

UNESCO PRINCIPAL REGIONAL OFFICE FOR ASIA AND THE PACIFIC, BANGKOK, 1995

This volume is one of a series of member country profiles on Technical and Vocational Education of the following member countries:

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FOREWORD

Technical and vocational education has always been an important component of UNESCO's consecutive Medium Term Plans. The basic objective of this programme is to support the efforts of Member States to link education systems more closely to the world of work and to promote the expansion and improvement of technical and vocational education in the light of changing employment needs.

The Colombo Plan Staff College for Technician Education (CPSC) also dedicates itself primarily to enhancing the growth and development of the technician education systems in its member countries which are located in the Asia and Pacific region. Its programmes, projects and activities are geared to provide the needed impetus for the professional development of senior level personnel involved in technician education development efforts.

UNESCO has launched an International Project on Technical and Vocational Education (UNEVOC) as of 1992 in co-operation with the Government of Germany, ILO, FAO, UNDP and NGOs interested in the reform of technical and vocational education. This project focuses on exchanging information, research and experiences on policy and programme issues in technical and vocational through a network of co-operating institutions.

In a spirit of co-operation between UNESCO and CPSC, under UNEVOC, an attempt is being made to compile and publish studies on the development of technical and vocational education in Member States in the form of TVE profiles of 21 countries. It is hoped that this series will serve as a handy reference information on TVE systems, staff development, technical co-operation and information networking. These studies have been possible because of the full co-operation to UNESCO PROAP and CPSC by all concerned in the Member States.

The opinion expressed in this study are those of the authors and do not necessarily reflect the position of UNESCO and CPSC in this regard. This profile on Japan was prepared by Prof. Takashi Uematsu, Seconded Faculty Member to CPSC by the Government of Japan.

C.K. Basu
Director, CPSC

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Director, UNESCO PROAP

Part I

GEOGRAPHY AND HISTORY OF JAPAN

(Source: NIPPON - The Land and its People)

1.1 Geography

a) Location and Size of Japan

Japan is an island nation lying off the east coast of Asia. It has the general shape of a crescent and extends 3,000 km (1,860 miles) from tip to tip.

The country is made up of four main islands (Honshu, Shikoku, Kyushu and Hokkaido) which together with more than 4,000 smaller islands are collectively referred to as the Japanese Archipelago.

The nation's capital, Tokyo, lies at 140 degree east longitude (on a line with New Guinea and central Australia) and 36 degree north latitude (about the same as Tsingtao, Teheran, Malta, the Strait of Gibraltar and the Grand Canyon).

Japan's land area of about 378,000 square kilometres (146,000 square miles) is slightly larger than that of Malaysia, one twenty-fifth that of China, one twenty-fifth that of the United States and one fifth that of Indonesia

b) Japanese Geography

The islands of Japan are bounded by the Pacific Ocean on the east and the Japan Sea on the west. They are connected with the Asian Mainland by the relatively shallow-lying continental shelf. On the Pacific side of the islands are two regions of extreme depth known as the Japan Deep and the Izu-Ogasawara Deep. Several volcanic ranges running through the country have given Japan a great deal of variety in its topographical features. Its rivers are short and fast-flowing and form deep gorges in the mountainous areas. All of the major islands have highly irregular coast lines.

Lying on the Circum-Pacific earthquake zone, the Japanese Archipelago not only is the site of considerable volcanic activity but also is one of the world's most seismologically active areas.

Sixty-seven per cent of Japan's land area is mountainous and most of this is covered with forest. Agricultural land accounts for 15 per cent and residential 3 per cent. A mere 0.4 per cent is devoted to industrial purposes.

c) Population of Japan

Japan has a population of 120.75 million (1985) putting it in seventh place after China (1,059.52, 1985), India (750.90 million, 1985) the former Soviet Union (270.61 million, 1985) and the United States (239.28 million, 1985) Indonesia (163.39 million, 1985) and Brazil (135.56 million, 1985).

The population is greatest along the Pacific seaboard where the weather is mild and the transportation and industrial facilities are most highly developed. In fact, approximately 70 per cent of the nation's people live on the strip of coastal plain between Tokyo and the northern part of Kyushu. Advancing industrialization has been accompanied by a population shift toward the large cities and a remarkable population decline in the agricultural areas.

Of the ten cities in Japan with population of over one million, the largest, Tokyo, has 8.35 million inhabitants in its 23 wards and a grand total of 11.47 million inhabitants when its suburbs are included (1980). As an urban area, Tokyo thus places second in the world after Shanghai (pop. 11.85 million).

1.2 History of Japan

Until 10 or 20 thousand years ago, Japan was still connected to the Asian continent by land. Its complete separation, when it finally came, was the result of movements of the earth's crust. As an island country, Japan has not been susceptible to invasion but, being relatively close to the continent, it has had fairly easy access to advanced foreign cultures. This allowed the country to possess a culture having many points in common with that of the continent while simultaneously developing a highly independent and thoroughly "Japanese" culture.

a) Primitive times (up to the third century):

The period extending from 10,000 years ago up to the third or second century B.C. is referred to as the ***Jomon*** period. The main sources of livelihood during this period were hunting, fishing and gathering. Following the ***Jomon*** period came the ***Yayoi*** period which lasted to around the third century A.D. It was during this period that the Japanese mastered the art of rice cultivation, began to use metal implements and set the fundamental patterns of Japanese life. A large number of small independent countries developed during the ***Yayoi*** period and then began to unite.

b) Ancient times (fourth century to twelfth century):

After consolidation of Japan into a single nation in the fourth century, successive emperors strengthened the foundations of the country by introducing various aspects of continental learning and culture. These included the Chinese writing system, various social systems, religion (Buddhism), ideology (Confucianism) and arts and crafts. The emperors of this period ruled in co-operation with a number of powerful families. The common people were for the most part engaged in the production of rice.

In the seventh century, a constitutional form of government modeled after that of China (T'ang) was introduced. The land and the people were no longer under the control of powerful families but were put under the direct rule of the state. Each farmer was granted 2,300 square metres (0.57 acres) of land and was required to pay a prescribed tax and contribute a certain amount of his time to defending the nation.

This system crumbled in the eighth century as the nobility began taking private possession of the land and establishing manors. With both the land and the people under their control, and established their own independent culture.

c) Middle ages (twelfth century to nineteenth century):

Warriors employed by the nobility to keep the peasants under control took advantage of their position of direct control over the farmers to greatly expand their power, until late in the twelfth century, they were able to replace the nobility as the de facto leaders of the country. The rule of the warrior class lasted nearly seven hundred years, finally coming to an end in the nineteenth century.

Formally, the leading warrior would be appointed by the emperor as his "***shogun*** in charge of conquering barbarian territories" and with this designation would set up his feudal government (***bakufu***) and take leadership over the feudal lords in the various parts of the country. In return for the ***shogun***'s recognition of the right of the feudal lords to rule over their territory and people, the lord would pledge their loyalty to the shogun

Early in the seventeenth century the feudal government broke off all relations with foreign countries, prohibited foreign travel and entered an era of isolation. Although the main industry during this period still continued to be agriculture, manufacturing and commerce became increasingly important. As the result of a long, peaceful period in the eighteenth and nineteenth centuries, the merchants were able to develop economic power far exceeding that of the warriors and as a consequence, the position of the warriors as the ruling class was badly shaken. This same period was also marked by rapid cultural and educational advances which were to serve as the foundation of Japan's ensuing development into a modern nation.

d) Modern times (from the mid-nineteenth century on):

The arrival of Commodore Perry from the United States in 1853 marked the end of Japan's isolation and caused the resumption of overseas trade. This turn of events put the ***bakufu*** in a very difficult position since international commerce put a severe strain on Japan's internal economy and this in turn strengthened the position of the anti-***bakufu*** forces. Thus it was in 1868 that the ***bakufu*** turned over its power to the Emperor, and in 1868 a new government was formed with the Emperor Meiji at its head. That a major military conflict was avoided at the time of this transition is a tribute to the wisdom of the leaders of both sides.

The 20-year period immediately following this transition saw the new Meiji government implement a wide range of measures modelled on European examples and designed to set Japan on its way to becoming a modern nation. Administrative innovations included the introduction of the cabinet system, the promulgation of a constitution which provided for independent legislative and judiciary branches of government and set forth the rights and obligations of the citizens, the establishment of an army modelled after that of Germany and a navy modelled after that of Britain, and various reforms in the systems of local government. On the economic side, the system of land ownership was revised, modern industries were promoted under direct government management and a uniform monetary system was instituted. A number of social reforms were also adopted: a modern school system was set up, the social and economic privileges of the warrior class were abolished and there was a general effort to assimilate Western culture.

These efforts at modernization greatly enhanced Japan's power internationally, but not to an extent that the nation could avoid occasional conflicts with the United States, Great Britain, France, Holland and Russia, all of which had interests in Asia.

Domestic developments continued to maintain a rapid pace. By the end of the nineteenth century, Japan's industrial revolution was well under way and the groundwork of capitalism had been laid. In the years following the First World War, political parties became an accepted part of the governmental system. Then with the onset of the Great Depression in 1929, the military was able to raise itself to political prominence and gain increasing control over both domestic and international policy. Thus the scene was set for the outbreak of war between Japan and China in 1937.

By the beginning of the Second World War an intense race had arisen between Japan and advanced nations attempting to maintain their foreign interests. Various sanctions were taken against Japan: her overseas assets were frozen and raw material exports to Japan were prohibited.

The Pacific War broke out in December, 1941, with Japan pitted against the United States and Great Britain.

During Japan's occupation by the Allied Forces following her defeat in 1945, the nation's governmental economic, social and educational systems underwent a thorough remodelling and her military forces were disbanded, all with the aim of giving the country a fresh start as a peaceful nation.

Part II

HISTORICAL AND CURRENT PERSPECTIVES OF GENERAL EDUCATION

Japan's educational system was reformed in the aftermath of the Second World War and great improvements were made in the quantity and quality of education. Japan is internationally known for its high level of education, and this is widely recognized as being the force behind the country's dramatic economic progress.

Quantitative expansion, however, has brought a variety of strains and with the dawn of the 1980s there has been a steady stream of criticism directed at the educational system. In response, the government is implementing a new educational reform to prepare for the 21st century.

Modern education in Japan began in 1872, based on European and U.S. models. The government directed its efforts toward broadening the availability of elementary education, and in 1920 enrolment reached 99 per cent similar to the levels in the advanced West. Secondary and tertiary education were also expanded based on a policy of developing human resources to meet the objectives of the state. It may well be said that education was one of the major factors in Japan's success in establishing a modern state in such a short period.

The foundations on which Japan's education system developed were first laid down around the beginning of the 17th century. The system was a dual one with separate schools for **the governing samurai** and for **commoners**, but some scholars claim that by the Meiji Restoration of 1868, levels of school enrolment and literacy were as high as those prevailing in England or France.

The postwar reforms were aimed at democratization and took the U.S. system as their model. Under the new system rapid progress was made in improving educational standards. In 1987, no fewer than 94 per cent of students completing the nine years of compulsory education went on to high school and 36 per cent of all 18-year-olds were attending university or junior college. These figures stand among the highest in the world.

This rapid quantitative expansion, however, has given birth to a variety of strains, and in an effort to overcome them, Japan is currently engaged in a reform of education with a long-term view toward the 21st century.

The Japanese people are well known for the high value they place on education, and they have always taken great interest in this subject. For centuries, under the influences of Confucianism and Buddhism, people tried through education

to realize the moral and ethical virtues of diligence, industry and harmony. Since its 17th century beginnings, education has opened the way for people of ability to move into high positions without regard to their parents' status or position.

In the wake of the post-World War II reforms and the resultant democratization, the passion for education has been further intensified. The career path by which one enters a first-rate school as a prelude to joining an elite corporation has become an important measure of the individual's value system.

The reform in education that is now under way is based upon a re-examination of the present system with its excessive attention to academic background.

2.1 The Path of Education Since the 17th Century

(Source: Education in Japan, "ABOUT JAPAN" SERIES, March 1988)

a) Education in the Edo Period

In 1603 **Tokugawa Ieyasu** established his hegemony over the whole nation and the rule of the **Tokugawa Shogunate,** known as **the Edo period,** lasted until **the Meiji Restoration** of 1868. This was a feudal regime and distinctions between **the ruling samurai** and **the common people** were strictly enforced. Education, too, was separate for the two groups, and the two systems developed independently. Under the influence of Confucian and Buddhist teachings there was a strong tendency to value education not only as a means of acquiring knowledge or skills, but also as a way to cultivate such spiritual or moral values as diligence, industry and harmony. The educational system during these centuries basically consisted of **the *hanko*** or fief schools for the **samurai** and the **terakoya** (small private schools usually run by a single teacher) for commoners.

Both the shogunate in Edo and the individual fiefs concentrated on educating the samurai for positions of leadership. From the middle of the period the *hanko* proliferated and by 1868 they numbered about 270. Confucianism was central to these institutions, but the curriculum gradually broadened and by the end of the Edo period there were more and more places where traditional Japanese and Chinese studies were augmented by the study of things Western, specifically Western medicine. There were also schools that accepted commoners as students. Graduates of these fief schools played the central role in Japan's modernization following the 1868 restoration.

The origins of the *terakoya* may be traced back to the educational establishments that had been operated for centuries by the Buddhist temples, but as the Edo period began and the productive power of the commoner classes increased, the need for literacy grew. Thus from the middle of the Edo period *terakoya* appeared even in farming and fishing villages, until by 1868 they numbered in the tens of thousands. The main focus of the *terakoya* was on the fundamentals of reading, writing, and arithmetic.

This dual system of education had reached a relatively high level by the end of the Edo period. Due to the paucity of data, the Ministry of Education declines to comment officially, but there are studies indicating that levels of school enrolment and literacy were on a par with those in England and France.

b) The First Educational Reform

In 1868 with the fall of the Tokugawa Shogunate, the emperor became the fount of political power and **the Meiji Era** began. The new government, conscious of the need to catch up with the Western powers, made haste to set up institutions geared to building a modern state. Efforts were made to modernize education on the Western model under the slogan ***fukoku kyohei*** *(national* prosperity, military strength) and in 1871 the government established the **Ministry of Education (MoE)** as the organ of centralized administration. The following year a new educational system was established which proclaimed an end to feudalistic discrimination in education based on social status and sex, and declared that educational opportunities were to be made more widely available. This is known as **the First Educational Reform** and it provided for the nationwide deployment of school teachers under centralized authority.

Thus the old system with its separate streams for samurai and commoner was abolished, but it must not be forgotten that the *hanko* and *terakoya* formed a major foundation of the new school system.

The First Educational Reform saw progress in organizing the school system that continued for many decades. There were kindergartens, which were optional, and six-year elementary schools, which were compulsory. One scholar has pointed out that while in 1872 elementary enrolment was 28 per cent in Japan and about 40 per cent in England, by 1900 the two countries stood shoulder to shoulder at 80 per cent. Statistics from MoE surveys show that enrolment stood at 35 per cent in 1875 and exceeded 99 per cent in 1920, a level which it has maintained ever since. This meant that equality of access to education was already a reality.

Secondary institutions comprised middle schools ***(chugakko)*** for boys, girls' high schools ***(joshi kotogakko)*** and a variety of vocational programmes. At the tertiary level the variety was even greater-higher schools ***(kotogakko,*** but not to be confused with the upper secondary or high schools of the present system), universities, technical colleges, normal schools and so on. In contrast to the compulsory elementary schools, where egalitarianism was the rule, admission to secondary and tertiary institutions was based strictly on ability, in line with the policy of developing human resources to achieve national goals. The percentage of students going on to the secondary level had, it has been claimed, exceeded the comparable figure in England by around 1910. In 1940 it stood at 25 per cent, but in that same year the percentage of the eligible age group that was enrolled in institutions of higher learning did not even reach 5 per cent.

Although admission to secondary and higher education was restricted, those with the ability were accepted without regard to class or status, and upon graduation

found the way open to high positions. Even the sons of the poor, if they had superior talent, could aspire to future advancement, and often were able to attend university with the assistance of a person of means. The importance accorded education since the Edo period was augmented by the possibility of upward mobility, further nurturing the national passion for education. At any rate, we may say that education is one of the major factors that made it possible for Japan to found a modern state in such a short period of time.

The military, meanwhile, began to exert itself during the 1930s and the tenets of militarism and ultra nationalism pervaded the education system. At the outbreak of the Second World War, the schools were put on a full wartime footing. Elementary pupils in urban areas were evacuated to remote rural areas to escape the bombing, secondary students were mobilized for war production and university students were inducted into the armed forces. By the end of the war, education was at a standstill.

c) The Second Educational Reform

With Japan's defeat in 1945, **the Allied Occupation** undertook a major restructuring to democratize the political, economic and social institutions of the nation. In education far-reaching changes were implemented on the basis of a report prepared by a group of U.S. educators.

The new system did away with the pre-war militarism and ultra nationalism. It set educational goals of orienting the nation toward culture and peace and encouraging the development of individuality and character. The new system was based on the philosophy of equal educational opportunity. As before there was a six-year elementary school, but secondary education was broken down into two levels-a three-year middle school ***(chugakko)*** and a high school ***(kotogakko)***, also three years long. Higher education institutions (the old higher schools) were all converted into four-year universities. This was **the 6-3-3-4 system**, and it greatly increased access to upper-level institutions. Compulsory education was extended from six years to nine through middle school, and kindergartens were formally recognized as part of the educational system. Administratively, in an effort to replace centralized control with greater local autonomy, popularly elected boards of education were established.

In 1947, in the confusion and impoverishment of defeat, the new school system began to take its first steps. As the postwar recovery proceeded it gradually found its footing, again reflecting the high hopes that the Japanese people place in education. Some felt, however, that in a number of respects the American model was unsuited to the situation in Japan and when the country regained sovereignty in 1952, the government undertook some modifications of the Occupation reforms. Among the most important of these was the 1956 change of the boards of education into appointive bodies. Other revisions were also made to the structure of the school system, including the establishment of the five-year technical colleges ***(kotosenmon gakko)***. Major changes were also made in the curriculum for the elementary and secondary levels. These revisions were strongly opposed by the **Japan Teachers'**

Union ***(Nikkyoso)***, the largest of the teachers' organizations and ever since that time the JTU and the Ministry of Education have been at loggerheads.

As the 1960s began, economic growth accelerated and the role of education in developing human resources assumed even greater importance. As the gross national product rose, people became even more avid for education, bringing a rise in the number of students continuing on to high school and university. The preoccupation with educational background, which meant that students who graduated from a good school could look forward to a promising future irrespective of the status of their parents, had existed even after the First Educational Reform, but it became even stronger with the greater access to education under the second. As the Japanese people came more and more to consider themselves middle-class, the desire to enter a first-rate university and thereby go on to a prestigious firm became stronger than ever and the competition for places became even fiercer.

Feeling that the schools alone failed to provide adequate preparation, more and more students began, from the compulsory grades onward, to attend commercially operated tutorial schools ***(juku)***. It has now become common to refer to these as a "**school after school.**" While the father -the worker bee-devoted long hours to the company, the mother was left in charge of the children's education. We find the phrase "**education mommy**" used to describe her inordinate desire to see her child get through the examinations.

d) The New Educational Reform

The new system arising out of the postwar reforms continued in its basic outline into the 1980s and brought about a great expansion of education, both in quantity and quality. As of 1987, more than 90 per cent of five-year-olds were attending preschool - kindergartens ***(yochien)*** or day care centres ***(hoikujo)***. Virtually everyone above the age of six receives the compulsory nine years of schooling, the standard of which is considered to be as high as that provided anywhere. After that full 94 per cent go on to high school.

With wider access to higher education, more and more people hold degrees and 36 per cent of 18-year-olds enrol either in four-year universities or two-year junior colleges.

This level of secondary and tertiary enrolment places Japan in the top level internationally.

On the other hand, the quantitative expansion in education has given rise to strains of various kinds, and with the dawn of the 1980s, criticisms of how education was developing gained strength both inside the educational community and beyond. The three main points at issue are as follows:

i) ***Excessive exam competition***

With economic progress and greater access to education, the tendency of the society to value educational background has strengthened to the point that the competition in examinations to enter top-rated schools and firms has

become frenzied. This has had a strong impact on the whole school system which has come to concentrate on memorization and rote learning of facts. Students from elementary school spend hours after school attending the private juku for tutorial and exam preparation classes, to the detriment of all-round personality development.

ii) ***Educational uniformity and rigidity***

Universal access to education has combined with an increased spirit of equality among the Japanese people to engender in the educational system and its administration an obvious uniformity and rigidity that is unable to respond to the increasingly diverse abilities and aptitudes of the students. This uniform system of force-feeding hinders the growth of powers of independent judgment and creativity and produces masses of people whose individuality is underdeveloped. This poses the danger that the nation will be unable to respond in time to important movements such as greater internationalization and greater reliance on information.

iii) ***Changes in the educational environment***

Ongoing social environment-materialism, decreases in the educative influence of the home and community, and the wide availability of suggestive information have exerted a harmful influence on children's development. The response to this by schools and teachers has not been productive, resulting in educational disintegration characterized by bullying and the resultant aversion to going to school, school violence and juvenile delinquency.

So despite Japan's postwar success in the quantitative expansion of education, the criticisms summarized above have shown the need for changes in favor of qualitative improvement and have increased the impetus for a new reform of education.

In response, the prime minister appointed **the Provisional Council on Educational Reform** (PCER) in 1984, reporting directly to himself, and it submitted its final report three years later.

The PCER views the coming reform of education as a response to cultural changes of historic proportions. In emphasizing that its success or failure will have an important impact on Japan's future, the Council has made a number of proposals covering a wide range of fields-curriculum, teachers' qualifications, the school system, entrance examinations, lifelong study, internationalization and the greater reliance on information, and educational administration and financing. Although there is no dearth of people who feel that these proposals fall short of effective reform, the Ministry of Education in 1987 initiated moves to implement these reforms over the long term.

Figure 1. Japanese School Non-Attendance and Illiteracy Rates, 1873-1919

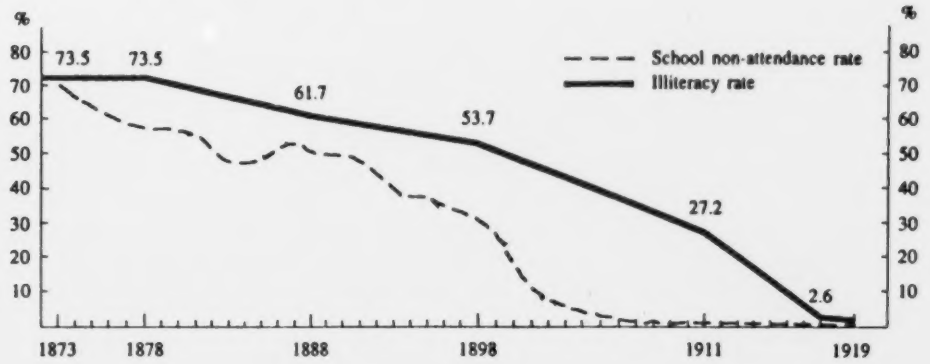
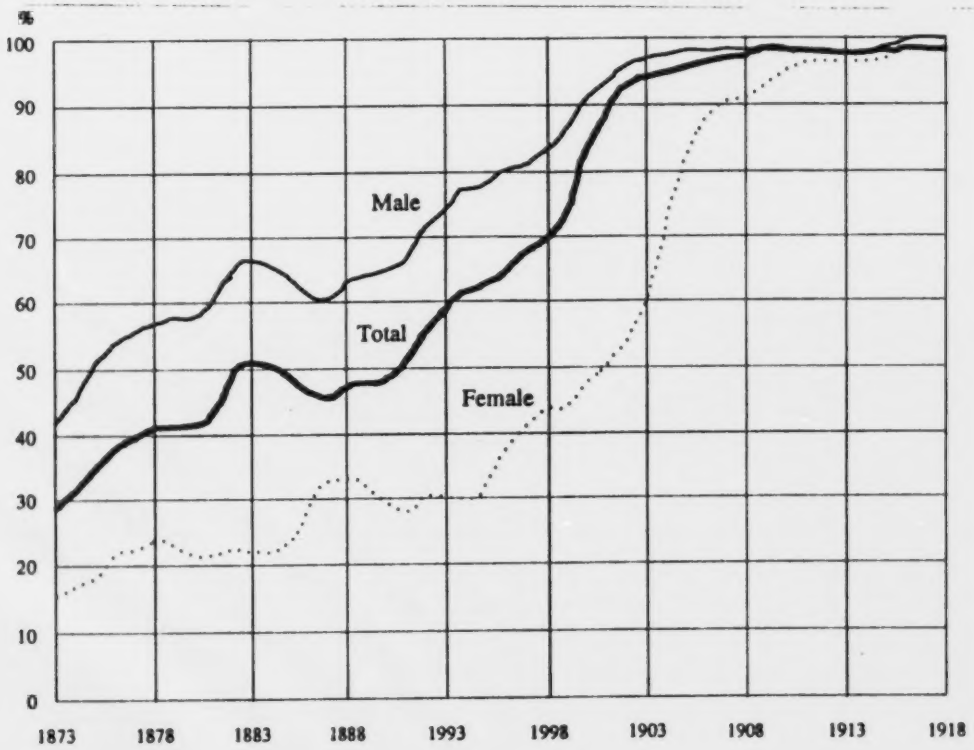
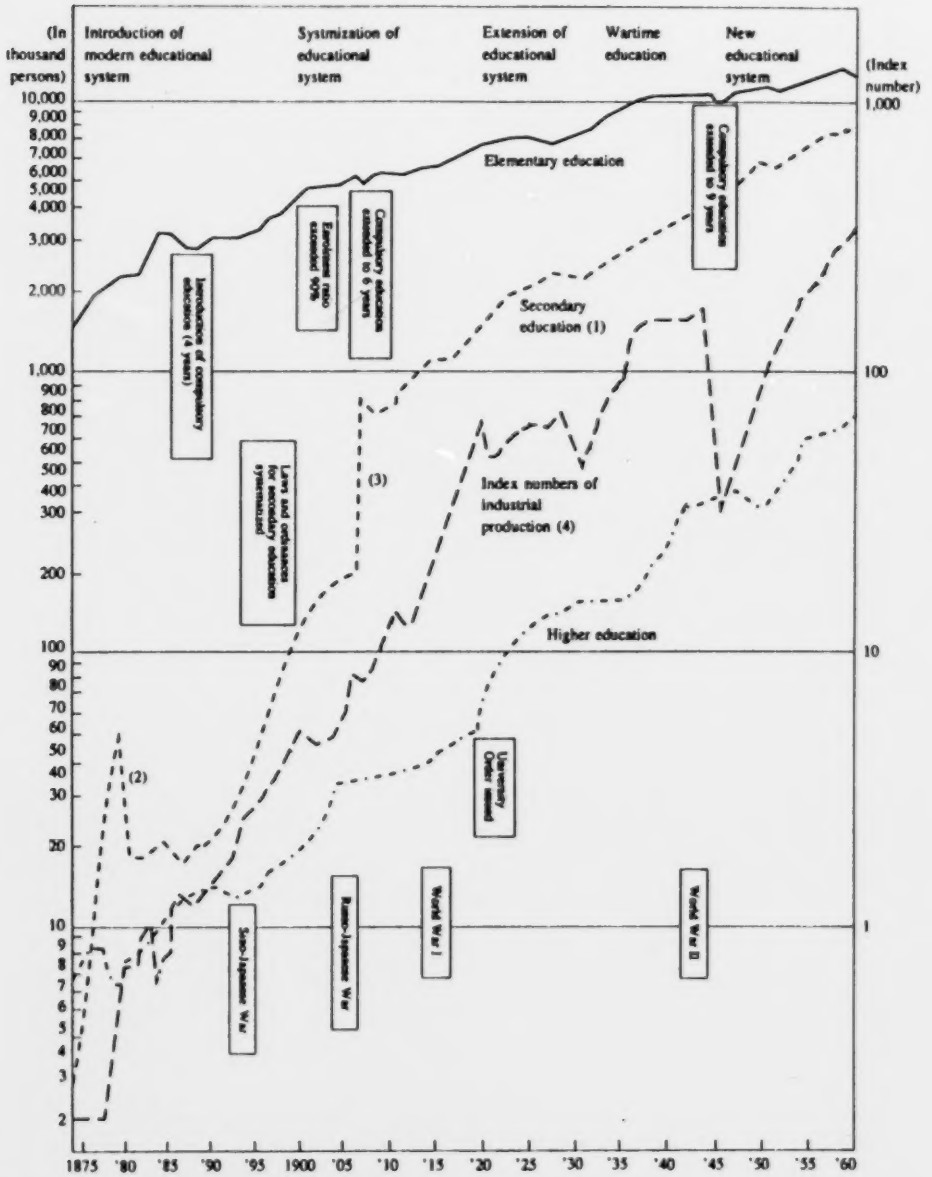


Figure 2. Transition in Learning Rates for Compulsory Education by Sex



Source: Ministry of Education, "Japan's Growth and Education"

Figure 3. Enrolment in Elementary, Secondary and Higher Education Institutions, 1875-1960


(In thousand persons)
Introduction of modern educational system
Systmization of educational system
Extension of educational system
Wartime education
New educational system
(Index number)
1,000
Elementary education
Secondary education (1)
Higher education
Index numbers of industrial production (4)
(2)
(3)
Introduction of compulsory education (4 years)
Laws and ordinances for secondary education systematized
Enrolment ratio exceeded 90%
Compulsory education extended to 6 years
Compulsory education extended to 9 years
University Order issued
Sino-Japanese War
Russo-Japanese War
World War I
World War II
1875 '80 '85 '90 '95 1900 '05 '10 '15 '20 '25 '30 '35 '40 '45 '50 '55 '60

Note:
1. Not including semi-secondary education.
2. By the Education Order of 1878, some sub-standard schools were excluded from the number of regular secondary schools.
3. Pupils of upper elementary schools were counted as secondary school enrolment.
4. 1935 = 100

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Figure 4. Enrolment of Higher Educational Institutions, 1870-1980

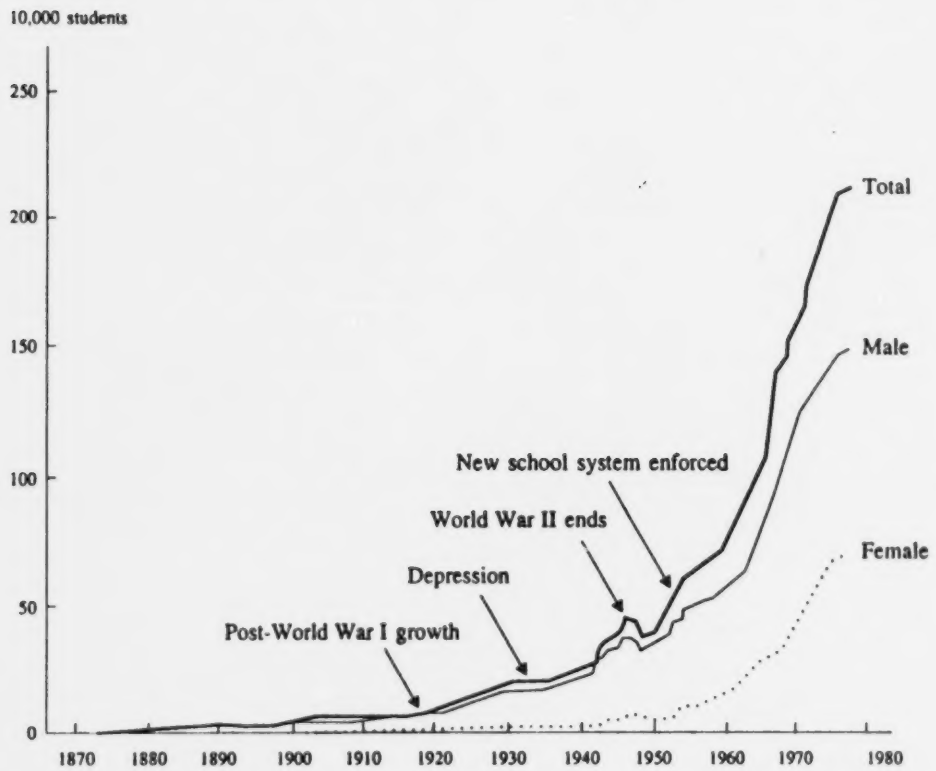


Figure 5. Enrolment in Higher Educational Institutions, 1950-80

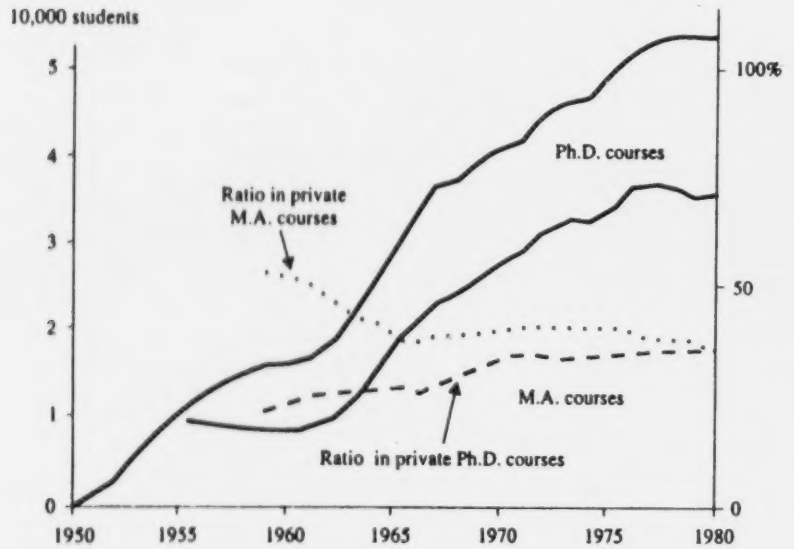
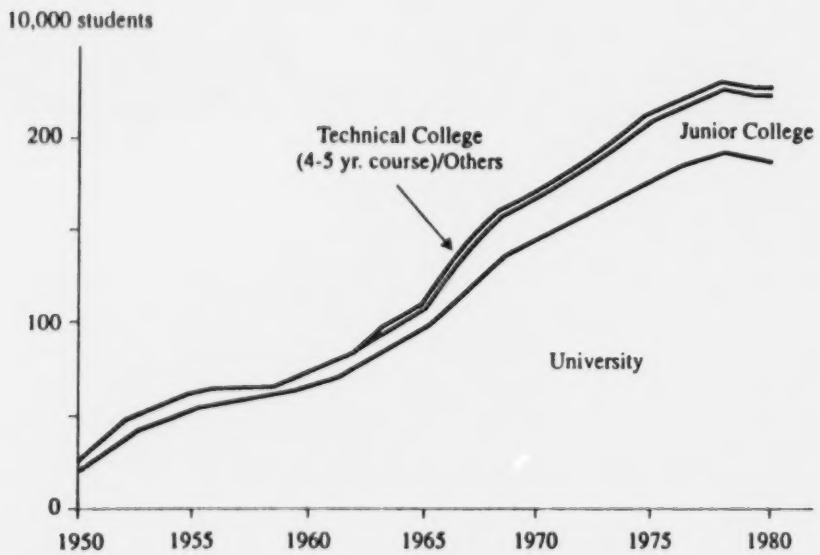


Figure 6. Enrolment in Graduate School, 1950-80



2.2 Current Educational System in Japan

a) Fundamental Principles of Education in Japan

Basic principles for education in Japan are provided for in the Constitution of Japan enacted in 1946 and the Fundamental Law of Education enacted in 1947.

The Constitution provides for the basic right and duty of the people to receive education as follows: "All people shall have the right to receive an equal education correspondent to their abilities, as provided for by law. The people shall be obligated to have all boys and girls under their protection receive general education as provided for by law. Such compulsory education shall be free." (Article 26)

The Fundamental Law of Education sets forth the basic national aims and principles of education in accordance with the spirit of the Constitution. The Law defines the central aim of education as "the full development of personality, striving for the rearing of people, sound in mind and body, who shall love truth and justice, esteem the value of the individual, respect labour and have a deep sense of responsibility, and be imbued with an independent spirit, as builders of a peaceful state and society." To achieve this aim, the Law sets forth national principles of education such as equal opportunity of education, nine-year compulsory education, co-education, prohibition against partisan political education.

More specific provisions relating to the school system, educational administration, financial support and other matters are specified in the School Education Law and many other educational laws and regulations which were enacted on the basis of the spirit of the Fundamental Law of Education.

b) Organization of the Educational System in Japan

Chart-II-1 shows the present organization of the school system in Japan based on the basic principles mentioned in the previous section. Major characteristics of each of the different types of institution of formal education are presented below.

i) Kindergartens (Yochien)

Kindergartens are non-compulsory schools intended to help infants develop their minds and bodies by providing them with an appropriate educative environment. They cater for pre-school children aged three or more.

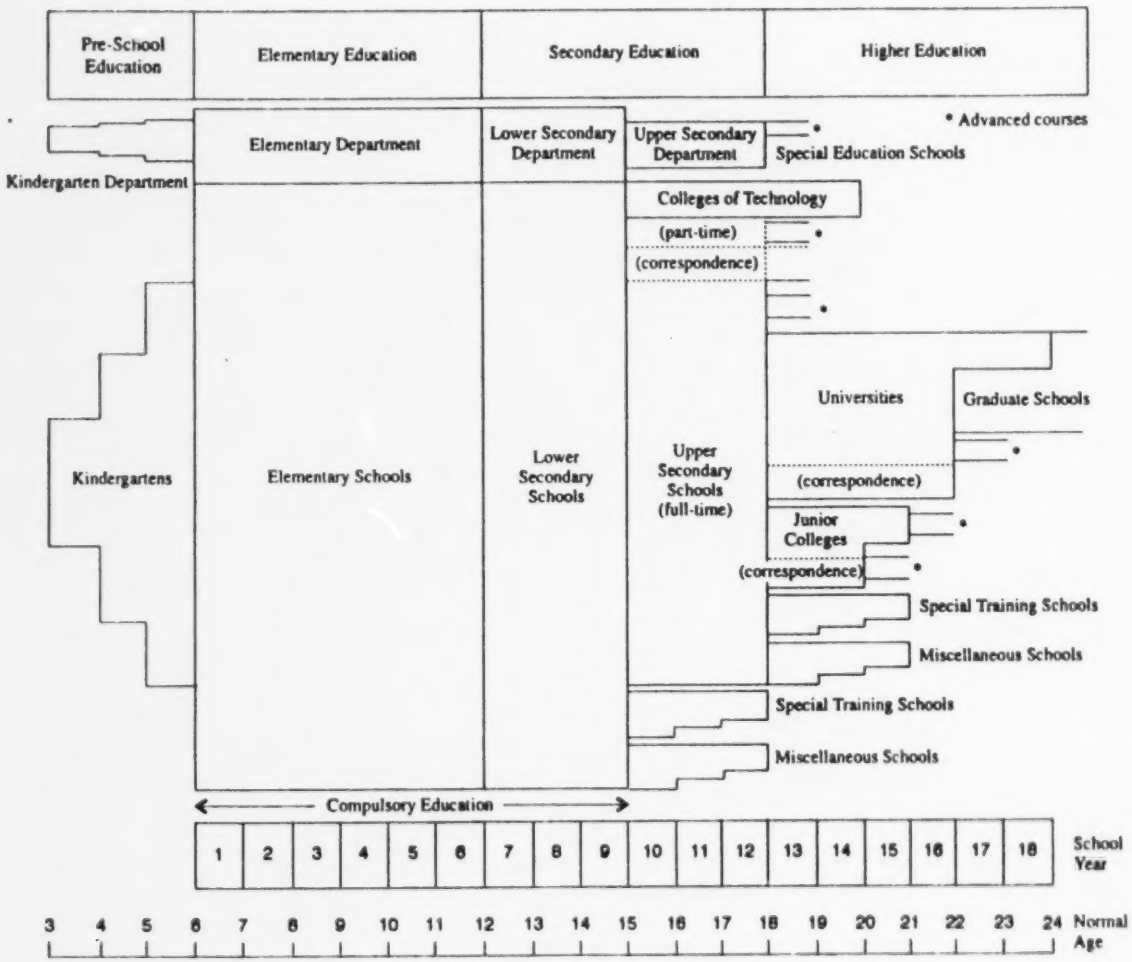
ii) Elementary Schools (Shogakko)

All children who have attained the age of six are required to attend a six-year elementary school. The elementary school is intended to provide children between the ages of 6 and 12 with elementary general education suited to the relevant stage of their mental and physical development.

iii) Lower Secondary Schools (Chugakko)

All children who have completed the elementary school course are required to go on to a three-year lower secondary school. The lower secondary school aims to provide children between the ages of 12 and 15 with general secondary education suited to the level of their mental and physical development, on the basis of education given in the elementary school.

Chart II-1. Organization of School System in 1989



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iv) Upper Secondary Schools (Kotogakko)

Upper secondary schools are intended to give lower secondary school graduates general and specialized secondary education suited to their level of mental and physical development, on the basis of the education given in lower secondary schools. There are three types of upper secondary school courses: full-time, part-time and correspondence. The full-time course lasts three years, while both the part-time and correspondence courses three years or more. Part-time courses are of two types; day course and evening course. The majority of them are evening ones.

In terms of the content of teaching, upper secondary school courses may be classified broadly into two categories: the general and the specialized. General courses offer general education putting emphasis on academic subjects, while specialized courses are designed to provide vocational, technical or other education for those students who have chosen a particular vocational area as their future career. These courses are further classified into several categories: agriculture, industry, business, fishery, home economics, nursing, science-mathematics, etc.

In 1988, "credit system" upper secondary schools were institutionalized, they fall under a special category of part-time and correspondence upper secondary schools. They are aimed at providing an upper secondary school education for a variety of students who have diverse schooling careers and diverse living circumstances. They are non-graded schools intended to give these students the qualification for graduation from an upper secondary school course on the basis of the total number of credits including those earned in any other upper secondary schools. Today there are 13 schools of this kind.

v) Special Schools and Classes for the Handicapped

Handicapped children who can hardly be expected to be appropriately educated in ordinary classes in elementary and lower secondary schools are provided with special educational treatment in accordance with the kind and degree of their disorder either at special schools for the handicapped (schools for the blind, schools for the deaf and schools for the otherwise handicapped) or at special classes in ordinary elementary or lower secondary schools.

Special schools for the handicapped aim to provide children with comparatively heavy handicaps with education equivalent to that available in ordinary elementary or secondary schools, and at the same time, to provide necessary knowledge and skills so as to make up for their students' deficiencies.

Special schools for the handicapped usually have at least both an elementary department and a lower secondary department. Some of them also have a kindergarten department and/or an upper secondary department.

There are three types of special schools for the otherwise handicapped: (a) school for the mentally retarded, (b) school for the physically handicapped and (c) school for the health-impaired.

Special classes in ordinary elementary and lower secondary schools cater for handicapped children whose handicaps are not so serious. These special classes may be classified into seven kinds according to the handicaps of children enrolled: (a) the mentally retarded, (b) the physically handicapped, (c) the health-impaired, (d) the partially sighted, (e) the hard-of-hearing, (f) the speech disoriented and (g) the emotionally disturbed.

vi) Institutions of Higher Education

Institutions of higher education in Japan include universities, junior colleges and colleges of technology. In addition, special training schools and miscellaneous schools offering advanced course (see (7) **Special Training Schools and others**) may be counted as institutions of higher education.

- **Universities (Daigaku)**

  Universities are institutions of higher education which, as a centre of learning, conduct teaching and research in depth in specialized academic disciplines and provide students with broad knowledge. Universities require for admission the completion of upper secondary schooling or its equivalent. A university has one or more undergraduate faculties or other basic units for educational activities, which offer courses usually lasting four years (six years for medical, dental and veterinary courses).

  A university may set up a graduate school aiming to give graduate students opportunities to pursue profound learning and research concerning academic theories and their application. Graduate schools require for admission the completion of an undergraduate course or its equivalent.

  A graduate school offers master's degree courses (the standard length of a course is two years) and doctor's degree courses (the standard length of course is five years, except for medical, dental or veterinary courses which last four years). Those students who have successfully completed these postgraduate courses may be awarded a master's or doctor's degree under certain conditions.

- **Junior Colleges (Tanki-daigaku)**

  Junior colleges aim to conduct teaching and research in depth in specialized subjects and to develop in students such abilities as are required for vocational or practical life. Junior colleges require for admission the completion of upper secondary schooling or its equivalent. They offer courses lasting two or three years. A junior

college has one or more specialized departments as its units of educational activities.

- **College of Technology (Koto-senmon-gakko)**

  Unlike universities or junior colleges, colleges of technology require for admission the completion of lower secondary schooling. They aim to conduct teaching in specialized subjects in depth and to develop in students such abilities as are required for vocational life. A college of technology usually offers several courses in engineering and mercantile marine studies. The duration of a course is five years for engineering courses and five and a half years for mercantile marine courses. There are a variety of engineering courses including those in mechanical, electrical, electronics, chemical, and civil engineering and information technology.

- **Special Training Schools (Senshu-gakko)**

  In addition to the above-mentioned elementary and secondary schools and institutions of higher education, there are a great number of educational establishments called "special training schools (Senshu-gakko) and "Miscellaneous schools" (Kakushu-gakko).

  Special Training Schools are educational institutions of a new type which were created in 1976. Under the new system introduced in the year a large number of miscellaneous schools offering systematic educational activities of an optimum standard have been legally designated as "**special training schools**".

  Special training schools are required to enrol at least 40 students constantly, to offer courses lasting at least one year, and to offer instruction for 800 hours or more per year for each course.

  The courses at special training schools may be classified into three categories: upper secondary courses admitting lower secondary school graduates; advanced courses admitting upper secondary school graduates; and other courses. Those special training schools offering upper secondary courses may be called "upper secondary special training schools", while those offering advanced courses "special training colleges".

  Miscellaneous schools are intended to give adults and young people a wide range of opportunities of education similar to formal education offered in secondary schools or institution of higher education. They provide students of varied ages with knowledge and skills required for their vocational and daily life. At present a relatively large number of students are enrolled in such courses as preparatory courses for university entrance examinations, automobile driving, home economics (including dressmaking and cooking), foreign languages, nursing, etc.

Table 1. Number of Institutions and Students by Type of Institution
(As of May 1989)

Type of Institution	Number of Institution	Number of Students				
		Male	Per cent	Female	Per cent	Total
Kindergartens	15,080	1,036,613	50.9	1,001,001	49.1	2,037,614
Elementary Schools	24,851	4,919,104	51.9	4,687,525	48.8	9,606,627
Lower Secondary Schools	11,264	2,875,400	51.2	2,743,897	48.8	5,619,297
Upper Secondary Schools	5,511	2,842,622	50.4	2,801,754	49.6	5,644,376
Technical Colleges	62	48,213	92.8	3,753	7.2	51,966
Junior Colleges	584	40,985	8.9	420,896	91.1	461,849
Universities**	499**	1,521,721**	73.6	545,241**	26.4	2,066,962
(Graduate Schools)*	303	72,187	84.7	13,076	15.3	85,263
Special Schools for the Handicapped	938	59,408	62.5	35,600	37.5	95,008
Special Training Schools	3,254	350,811	47.3	39,871	52.7	741,628
Miscellaneous Schools	3,570	223,802	50.6	218,384	49.4	442,186
Total	65,613	13,918,679		12,848,888		26,767,567

** The number of institutions represents the number of universities having a graduate school. The number of students in graduate schools represents number of students in universities in Master's courses or Doctor's courses (The number of students in universities include the enrolment in graduate schools)

* In addition to these, there was a University of the Air enrolling 26,076 students. Of the total students 13,263 (or 50.9 per cent) were men and 12,813 (or 49.1 per cent) women.

Table 2. Enrolment in Educational Institutions of Each Level by Type
(As of May 1989)

Type of Private Institution	Total	National	Per cent	Local Public	Per cent	Private	Per cent
Kindergartens	2,037,614	6,557	0.3	45,148	22.3	1,576,909	7.4
Elementary Schools	9,606,627	47,400	0.5	9,496,553	98.9	62,674	0.6
Lower Sec. Schools	5,619,297	36,502	0.6	5,386,134	95.9	196,661	3.5
Upper Sec. Schools	5,644,376	10,362	0.2	4,030,091	71.4	1,603,923	28.4
Technical Colleges	51,966	44,612	85.9	4,131	7.9	3,223	6.2
Junior Colleges	461,849	18,988	4.1	22,500	4.9	420,361	91.0
Universities[1] [2]	2,066,962	504,890	24.4	61,264	3.0	1,500,808	72.6
(Graduate Schools)	(85,263)	(54,425)	(63.8)	(3,640)	(4.3)	(27,198)	(31.9)
Special Schools for the Handicapped	95,008	3,658	3.9	90,440	95.2	910	0.9
Special Training Schools	741,682	17,548	2.4	26,849	3.6	697,285	94.0
Miscellaneous Schools	442,186	99	0.0	7,812	1.8	434,275	98.2

Note

(1) For universities, the number of students includes students enrolled in graduate schools

(2) In addition to these, 26,076 students were enrolled in the University of the Air which was run by a special non-profit corporation supported by the national government.

Table 3. Number and Proportion of Lower Secondary School Graduates of March 1989 Advancing to Upper Secondary Schools and Colleges of Technology

	Male	Female	Total
1. Lower Secondary School Graduates of March 1989	1,048,917 (100%)	1,000,554 (100%)	2,049,471 (100%)
2. Those who entered Upper Secondary School	972,590 (92.7%)	958,191 (95.8%)	1,930,781 (94.2%)
3. Those who entered Colleges of Technology	9,383 (0.9%)	1,156 (0.1%)	10,539 (0.5%)
4. Those who entered either Upper Secondary Schools or Colleges of Technology (2+1)	981,973 (93.6%)	959,347 (95.9%)	1,941,320 (94.7%)

Figure 7. Trends in Percentage Distribution of Upper Secondary School Student by Type of Education

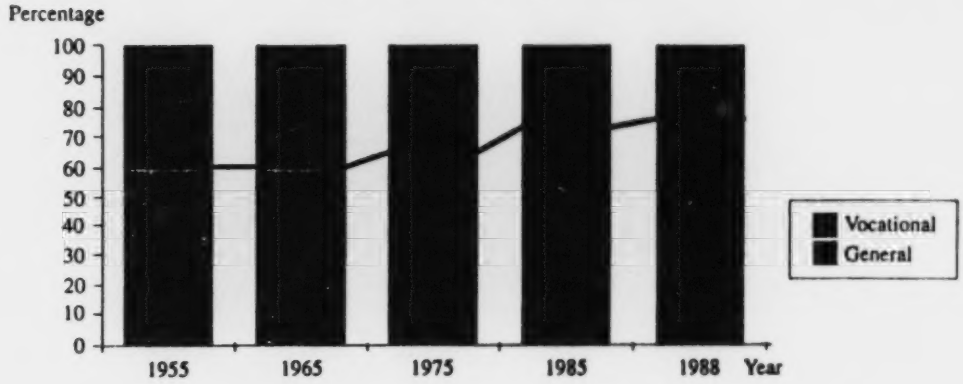


Figure 8. Percentage Distribution of Upper Secondary School Students by Type of Course (as of May 1989)

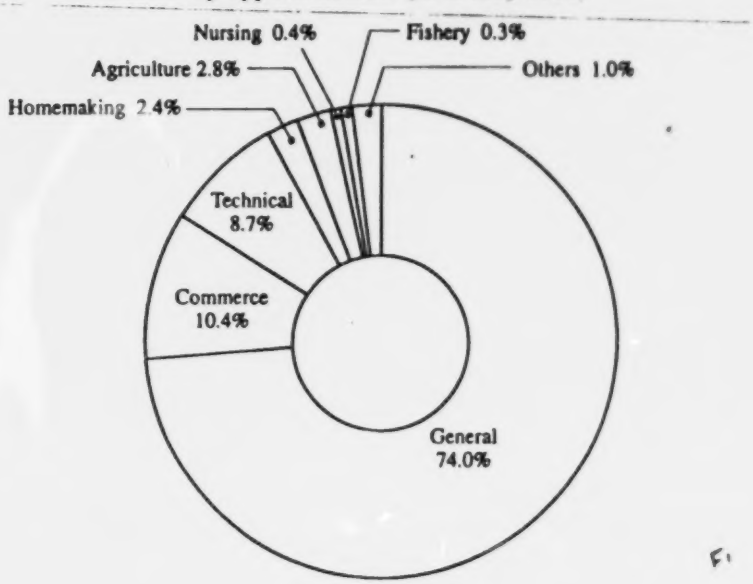


Figure 9. Percentage of Distribution of University and Junior College Students by Major Field of Study (as of May 1989)

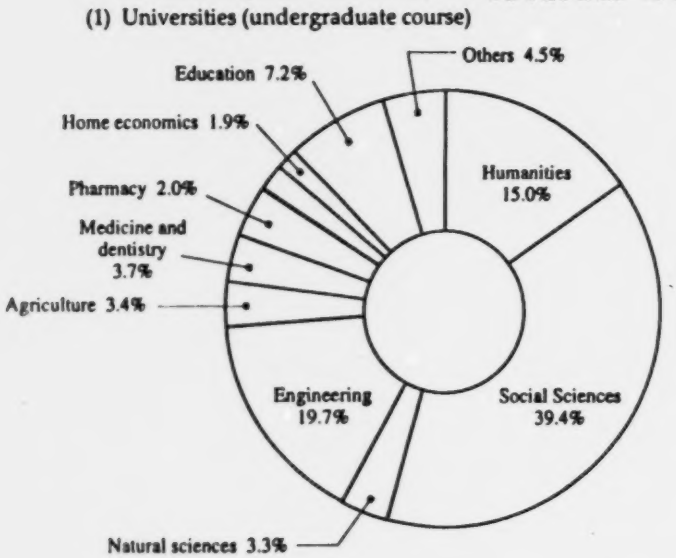


Figure 10. Quantitative Development of Special Training School

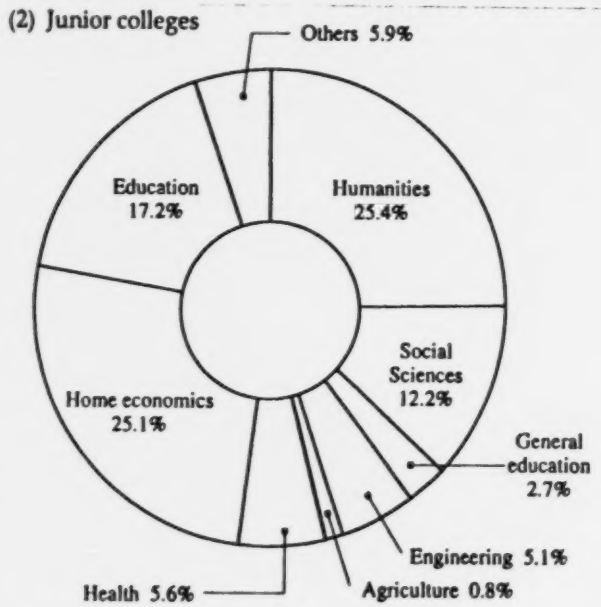
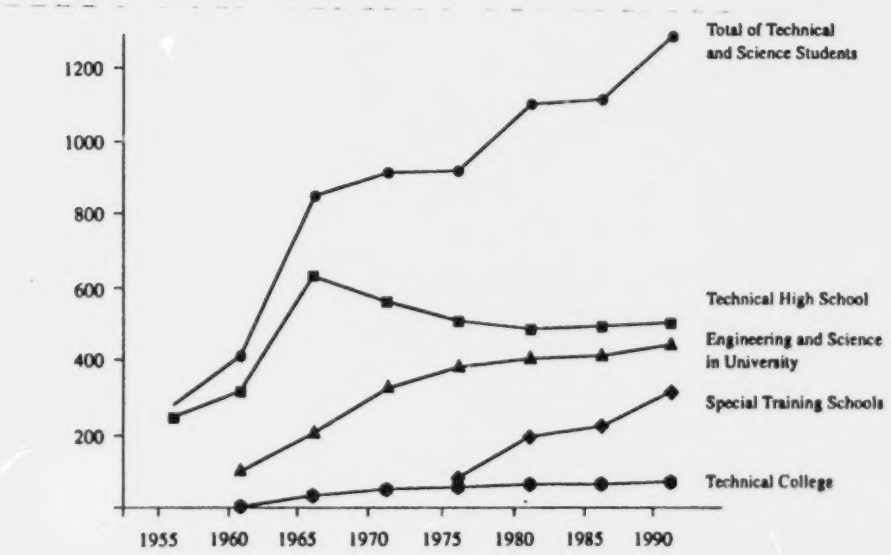


Figure 10. Quantitative Development of Special Training School



Part III

TECHNICAL AND VOCATIONAL EDUCATION IN JAPAN

3.1 Structure of Technical and Vocational Education and Training

The general structure of TVET systems is shown in Chart II-2. Under the current education system in Japan, TVET is conducted by the two jurisdictional ministries. On one hand, technical and vocational education in schools is being undertaken by the Ministry of Education. On the other hand, vocational training is directed by the Ministry of Labour. Under the Ministry of Education, courses in such areas as

- Industrial arts in the lower secondary education,
- Industrial science in the upper secondary education,
- Colleges of Technology, Special Training Schools, and
- Schools of Engineering and Science in Junior Colleges

are regarded as constituting the technical and vocational education system in Japan.

On the other hand, vocational training is administrated by the Ministry of Labour. The following types of training are defined as vocational training, which are conducted at out-of-school job training institutions.

- **Basic Training**
  (Short courses, General courses, Special courses, Short-term special courses)
- **Upgrading Training**
  (Grade I, Grade II certified skilled worker training courses, Mono-grade certified skilled worker training courses, Supervisory training courses and Skills upgrading training courses)
- **Vocational ability development training**
  (Short courses, Job conversion training courses)

3.2 Technical Education by the Ministry of Education

a) Lower Secondary Schools

"Industrial arts" forms a part of general education provided by all Lower Secondary Schools (7, 8 and 9 grade students). Yet, as seen in its contents and

objectives, it is the subject area having the closest bearing on technical education. This subject area is aimed primarily at having students learn the basic techniques necessary in life and additionally at enabling them to undertake planning, manufacturing and maintenance tasks through their independent, creative and practical activities.

The actual lessons for this subject are not limited merely to paper work on the desk, as in the case of mathematics, language study, etc., but is given by having students actively manufacturing and measuring articles. That is, it follows mainly the teaching formula based on experiments and practices, as employed in technical education.

b) Upper Secondary Schools

Technical education (Industrial Science) in upper secondary education (10 to 12 grade) is carried out in so-called technical high schools in most cases.

i) Objectives

Objectives of industrial science are as follows:

- **To have students acquire knowledge and techniques necessary for middle-level technicians in each field of industry.**
- **To have students understand the scientific basis of industrial technology and develop the ability and desire to strive for its improvement and progress.**
- **To have students understand the social and economic significance of industry and develop the ability and desire for mutual cooperation in work, thereby developing the desire to strive for industrial development.**

ii) Curriculum

Industrial science students are expected to study the social sciences and the economic aspects of occupations and the scientific and the technological information for entry into the various occupation. Specific job training is not a part of the technical education in upper secondary school programmes. According to the Course of Study for Upper Secondary School, the curriculum comprises subjects which are grouped into various major fields. Each school is free to construct the curriculum with varied characteristics within the framework of a number of basic requirements. Construction of this curriculum with unique variations is rather encouraged as conducive to a clarification of the specific educational objectives of each school and course. As regards the nominations of technical courses, discrepant ones are used sometimes, such as the electricity course, electric power course, electric machinery course etc., depending on their respective educational objectives.

c) Special Training Schools

The special training schools system plays a unique role in the whole educational system in Japan. They offer a variety of practical technical and vocational education programmes in response to diverse demands of people in a

changing society. The national standard regulations for the establishment of these schools, providing for the qualifications of teachers, physical facilities and equipment and other requirements, are broader and more flexible than those for the other institutions of formal education, so that these schools may easily carry out their unique functions. Therefore, these schools are expected to play a greater role in responding to the diverse learning needs of people in a lifelong learning society.

The system of special training schools was inaugurated in 1976 under the amended School Education Law. During recent years, special training schools, in which approximately 750,000 students are enrolled, were established. To meet a great variety of needs, special training schools provide students with a variety of learning opportunities by offering them a wide range of courses in technical and vocational education, as well as general education.

The increasing needs for special training schools and miscellaneous schools can be exemplified by the fact that a growing number of students enrolled in universities and colleges attend these schools to acquire practical knowledge and skills, such as communication skills in a foreign language and information processing techniques.

d) Special Training Colleges

The Special Training Colleges of the Special Training Schools system in particular, are regarded as higher education institutions, admit students who had finished 12 years school education (6 years compulsory and 6 years secondary) and the programmes last for two years in many cases. It offers students various types of job related arts and skills. They are certified by each local government, under article 82 of the School Education Law. Most of the 2,700 such schools in Japan are organized on a small scale. The number of students in attendance is around 560 thousand greater than the attendance at two-year academic colleges. Special Training Colleges provide practical technical vocational education to cope with various learning needs which are affected by the changes in industrial society.

e) Colleges of Technology

Colleges of Technology, unlike universities or junior colleges, require for admission the completion of lower secondary schooling and offer five year programmes aimed at training technicians.

Colleges of Technology came into existence in 1962, and there were 62 colleges in May 1989.

Colleges of Technology offer courses in mechanical, electrical, chemical engineering, industrial chemistry, etc.. This system makes it possible to carry on both general education and specialized education effectively. One advantage of these colleges is the continuous five-year education system through which students graduate two years earlier than university graduates. In addition, those students who have completed a college technology course may apply for admission to the upper division of a university. Another advantage is that the national colleges of technology

usually have three, four, or five classes in each grade. Each individual class is made up of forty students. Thus, under favourable conditions of small classes a very good education and relationship between teachers and students is offered. There is a ratio of one teacher to ten students.

A third advantage is that with the acquisition of practical techniques as well as underlying theories, importance is attached to experiments and practical exercises. As a result of the efficient curriculum implementation, the graduates face no problems getting a job. The employment rate of the graduates of the college is very high every year and the number of jobs offered is about 40 to 50 times greater than that of the applicants.

f) Junior Colleges

Admission to Junior Colleges requires the completion of upper secondary schooling or equivalent. They offer courses lasting two or three years. Junior colleges aim at conducting teaching and research in depth in specialized subjects and at developing in students such abilities as are required for vocational or practical life. As of 1989, there are 23 thousand students studying engineering subjects in junior colleges. The credits acquired at Junior Colleges may be counted as part of the credits leading to a bachelor's degree in a university.

3.3 Vocational Training by Ministry of Labour

Technical education in the school system has been discussed in this paper so far. However, there is another system concerning vocational training conducted under the umbrella of the Ministry of Labour in Japan. The following chart shows more details of TVET. The paper does not discuss this issue because the number of people involved in vocational training is rather small (around 1% of fresh leavers of compulsory education as shown in Chart II-3), and availability of its reference materials is quite limited.

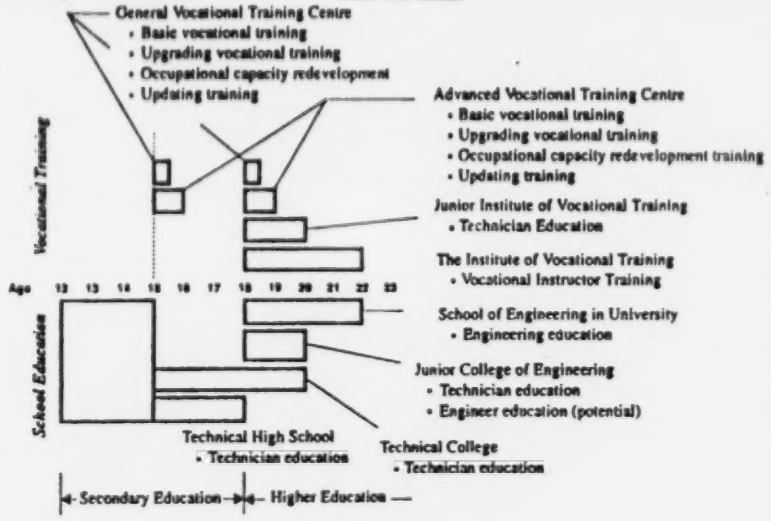


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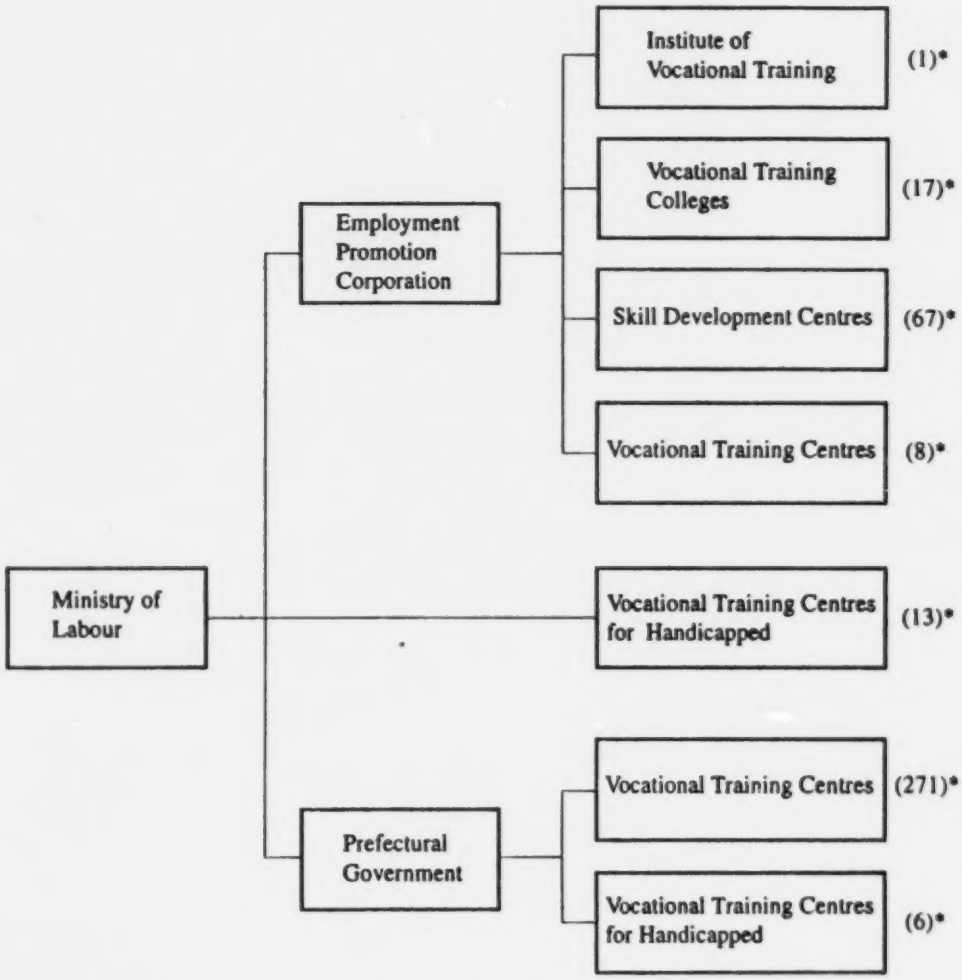
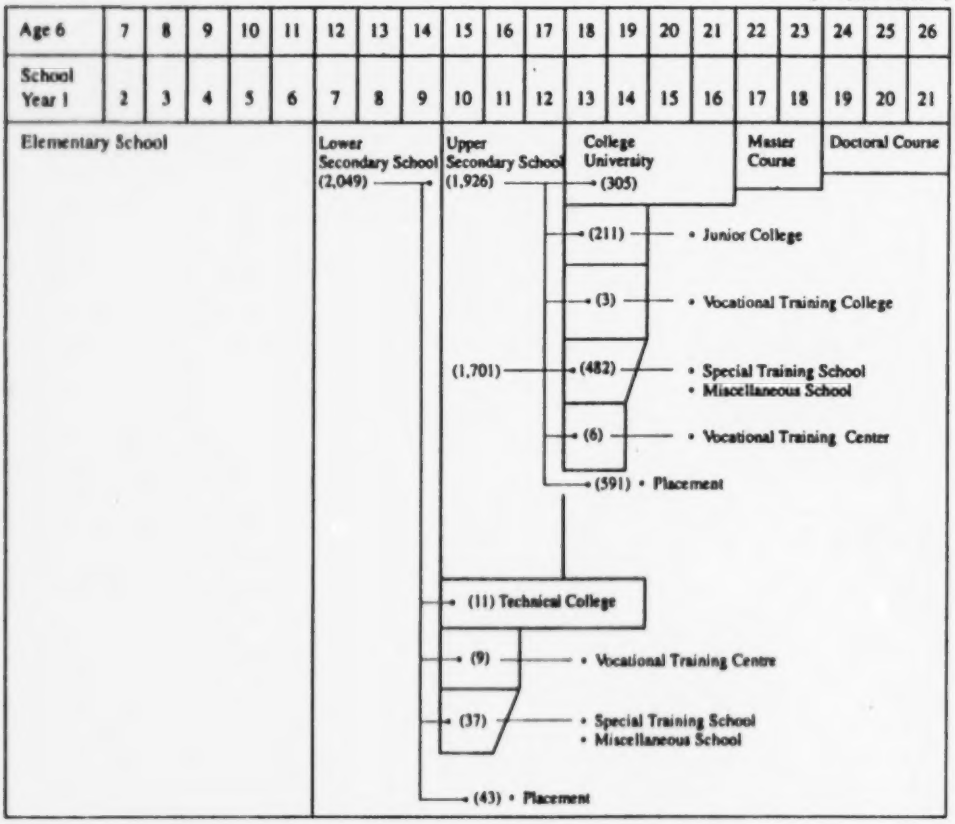
Chart II-2 Structure of Public Vocational Training in Japan



* Number of Institutions

Chart II-3 School Education and Vocational Training

(X 1,000 Persons)


Age 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
School Year 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Elementary School
Lower Secondary School
(2,049)
Upper Secondary School
(1,926)
College University
(305)
Master Course
Doctoral Course
(211) • Junior College
(3) • Vocational Training College
(1,701)
(482) • Special Training School • Miscellaneous School
(6) • Vocational Training Center
(591) • Placement
(11) Technical College
(9) • Vocational Training Centre
(37) • Special Training School • Miscellaneous School
(43) • Placement

Note: Figures in ( ) indicate the number of graduates and the items by their career after the graduation in March 1989.

Table II-4. Outline of Vocational Training by Type

Type of vocational training	Training Courses	Outline of Training	Training Period	Vocational Training Facilities
Basic Training (Initial Training)	Short-term Training Course	To provide basic skills and knowledge required of skilled workers	More than 12 hours	Vocational Training Centre
	Ordinary Training Course	To provide skills and knowledge required multi-skilled workers	Junior high school graduates: 2 years; Senior high school graduates: 1 year.	
	Special Training Course	To foster technicians	Senior high school graduates: 2 years	Vocational Training College
Upgrading Training	Grade I: Certified Skilled Worker Training Course	To provide knowledge required of grade I certified skilled workers	6 months, 1 year by correspondence	Vocational Training Centre
	Grade II Certified Skilled Worker Training Course	To provide knowledge required of grade II certified skilled workers		Skill Development Centre
	Mono-grade Certified Skilled Worker Training Course	To provide knowledge required of Mono-grade certified skilled workers		Institute of Vocational Training
	Managerial and Supervisory Training Course	To improve ability of managers or supervisors	More than 10 hours	
	Skill Upgrading Training Course	To provide additional skills mainly to those who are already in service according to their level of skills	More than 12 hours	
Capability Redevelopment Training	Short-term Training Course	To provide skills necessary of simple works	More than 12 hours	Vocational Training Centre
	Job Conversion Training Course	To provide those who are unemployed or wishing to change their jobs with skills and knowledge necessary for re-employment	2 months - 1 year	Skill Development Centre

Table II-5 Outline of Public Vocational Training Centre

Training Facilities	No. of Centres	Capacity		
		Basic Training	Upgrading Training	Skill Development Training
Vocational Training Centres	Prefectual 271* Employment Promotion Corporation 8 Total 279	29,905	93,930	43,410
Vocational Training Colleges	Employment Promotion Corporation 17	3,640	...	...
Skill Development Centres	Employment Promotion Corporation 67	810	162,010	48,135
Vocational Training Centres for the Handicapped	National 13 Prefectual 6	2,750	...	...
		37,105	256,060	91,545
Grand total	382	384,710		

* A centre by a local government is included.

List of Trades for Skill Testing

Horticultural decoration
Landscape gardening
Well boring
Metal melting
Casting
Forging
Power metallurgy
Metal heat treatment
Machining
Iron work
Building sheet metal work
Electric discharge machining
Die making
Metal Press
Factory sheet metal work
Industrial engraving
Electroplating
Aluminum anodizing
Thermal spraying
Metal spring manufacturing
Hydraulic system adjustment
Rope processing
Finishing
Metal polishing and buffing
Cutting tool grinding
Machine inspection
Die casting
Machinery maintenance
Electronic circuits connecting
Electronic equipment assembling
Electric equipment assembling
Semiconductor goods manufacturing
Printed wiring board manufacturing
Home electric health equipment adjustment
Vending machine adjustment
Rolling stock equipping
Rolling stock maintenance
Ship equipping
Timepiece repairing
Eyeglass processing
Optical equipment manufacturing
Copy machine assembling
Internal combustion engine assembling
Pneumatic circuits and apparatus device assembling
Plastic molding
Sewing machine maintenance
Construction machine maintenance
Agricultural machine maintenance
Weaving machine adjustment
Dyeing
Knit goods manufacturing
Dressmaking
Tailoring
Kimono making
Bedclothes manufacturing
Cavass goods manufacturing
Cloth sewing
Woodworking machine maintenance
Wood pattern making
Cabinet making
Fittings making
Bamboo arts and crafts
Carton box and corrugated cardboard box making
Block copy making
Plate making
Printing
Bookbinding
Lumbering saw setting
Reinforced plastic moldings
Refrigerating and air conditioning equipment installation

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